

# *Annual* **WATER QUALITY REPORT**

*Reporting Year 2013*



*Presented By*  
**Quartz Hill Water District**

PWS ID#: 1910130

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

## There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2013. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

## Community Participation

We welcome input from our rate payers. The Board of Directors meets in our Conference Room on the third Thursday of each month at 7:00 pm. The public is always welcome to attend Board Meetings.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

## Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (U.S. EPA) and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

**Microbial Contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

**Inorganic Contaminants**, such as salts and metals, that can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**Pesticides and Herbicides**, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

**Organic Chemical Contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

**Radioactive Contaminants**, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

## From The General Manager

This year Quartz Hill Water District is facing an abnormally dry year, as denoted by Governor Brown's Drought State of Emergency address on January 17, 2014. Quartz Hill Water District has taken several proactive steps for just such an emergency. One of the methods the District has used to preserve the Antelope Valley's precious ground water resource for such a drought was to purchase surplus surface water when it was available the past several years so the demand on the ground wells could be minimized. Another method used to safeguard the District's customers was to purchase surplus water during wet years and store it in the Antelope Valley East Kern Water Bank (this is an area where water is spread on the ground so it can percolate to the aquifer and be stored for a future date).

Quartz Hill Water District continues to rely on two sources of water to supply all of our customers. The first source comes from the Antelope Valley Ground Water Basin and is commonly referred to as ground water. In 2013, 42% of the total amount of water used by the District came from the district-owned wells. These wells vary in depth from 500 to 600 feet and are monitored daily to ensure that only the highest quality of water is distributed through our system. The second source of water that supplies the Quartz Hill Water District comes from Antelope Valley East Kern Water Agency's Quartz Hill Treatment Plant. This source provided 58% of the total water used during 2013. This water is supplied to the district through two interconnections that are both located south of M-8.

Monthly general physical samples are tested on the distribution system as well as weekly bacteriological samples throughout the system to ensure that only the highest quality of water is delivered to our customers. Additional parameters, not shown in this pamphlet, were tested but not reported because of no detection. All water quality analyses were conducted by a state-certified laboratory in compliance with California Department of Public Health Drinking Water Standards.

Respectfully,

Chad J. Reed

General Manager

## Source Water Assessment

A Source Water Assessment Plan (SWAP) is available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the Source Water Assessment Plan, our water system had a susceptibility rating of "medium". If you would like to review the Source Water Assessment Plan, please feel free to contact our office during regular business hours.

## Lead in Home Plumbing

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Chad Reed, General Manager, at (661) 943-3170. The Antelope Valley East Kern Water Agency (AVEK) 2013 Water Quality Report is available on request.



# TipTopTap

## Water Main Flushing

**D**istribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through the mains.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen, disinfectant levels, and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water, to prevent sediment accumulation in your hot water tank.

Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

**T**he most common signs that your faucet or sink is affecting the quality of your drinking water are discolored water, sink or faucet stains, a buildup of particles, unusual odors or tastes, and a reduced flow of water. The solutions to these problems may be in your hands.

### **Kitchen sink and drain**

Hand washing, soap scum buildup, and the handling of raw meats and vegetables can contaminate your sink. Clogged drains can lead to unclean sinks and backed up water in which bacteria (i.e., pink and black colored slime growth) can grow and contaminate the sink area and faucet, causing a rotten egg odor. Disinfect and clean the sink and drain area regularly. Also, flush regularly with hot water.

### **Faucets, screens, and aerators**

Chemicals and bacteria can splash and accumulate on the faucet screen and aerator, which are located on the tip of faucets and can collect particles like sediment and minerals resulting in a decreased flow from the faucet. Clean and disinfect the aerators or screens on a regular basis.

Check with your plumber if you find particles in the faucet's screen as they could be pieces of plastic from the hot water heater's dip tube. Faucet gaskets can break down and cause black, oily slime. If you find this slime, replace the faucet's gasket with a higher-quality product. White scaling or hard deposits on faucets and shower heads may be caused by hard water or water with high levels of calcium carbonate. Clean these fixtures with vinegar or use water softening to reduce the calcium carbonate levels for the hot water system.

### **Water filtration/treatment devices**

A smell of rotten eggs can be a sign of bacteria on the filters or in the treatment system. The system can also become clogged over time so regular filter replacement is important. (Remember to replace your refrigerator filters!)

## Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

### REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Arsenic</b> <sup>1</sup> (ppb)	2013	10	0.004	7.04	5.2–15.0	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
<b>Barium</b> (ppb)	2013	1,000	2,000	25	0–100	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
<b>Chlorine</b> (ppm)	2013	[4.0 (as Cl <sub>2</sub> )]	[4 (as Cl <sub>2</sub> )]	0.59	0.03–1.11	No	Drinking water disinfectant added for treatment
<b>Fluoride</b> (ppm)	2013	2.0	1	0.63	0.51–0.72	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Gross Alpha Particle Activity</b> (pCi/L)	2013	15	(0)	2.76	0–12	No	Erosion of natural deposits
<b>Haloacetic Acids–Stage 2</b> (ppb)	2013	60	NA	10.45	8.0–17.9	No	By-product of drinking water disinfection
<b>Nitrate [as nitrate]</b> (ppm)	2013	45	45	16.84	3.2–19	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>Nitrite [as nitrogen]</b> (ppm)	2013	1	1	3,804	720–5,600	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
<b>Radium 226</b> (pCi/L)	2013	5	0.05	0.03	0.04–0.197	No	Erosion of natural deposits
<b>Radium 228</b> (pCi/L)	2013	5	0.019	0.01	0.001–0.036	No	Erosion of natural deposits
<b>TTHMs [Total Trihalomethanes]–Stage 2</b> (ppb)	2013	80	NA	38.21	18.7–69.6	No	By-product of drinking water disinfection
<b>Uranium</b> (pCi/L)	2013	20	0.43	2.43	0–7.1	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
<b>Copper</b> (ppm)	2013	1.3	0.3	0.37	0/32	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Lead</b> (ppb)	2013	15	0.2	5.6	0/32	No	

### SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
<b>Chloride</b> (ppm)	2013	500	NS	34.6	13–44	No	Runoff/leaching from natural deposits; seawater influence
<b>Corrosivity</b> (Units)	2013	Noncorrosive	NS	11.99	11.76–12.08	No	Natural or industrially influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors
<b>Odor–Threshold</b> (Units)	2013	3	NS	1	1–1	No	Naturally occurring organic materials
<b>Specific Conductance</b> (µS/cm)	2013	1,600	NS	500	350–550	No	Substances that form ions when in water; seawater influence
<b>Sulfate</b> (ppm)	2013	500	NS	53.2	29–72	No	Runoff/leaching from natural deposits; industrial wastes
<b>Total Dissolved Solids</b> (ppm)	2013	1,000	NS	314	230–340	No	Runoff/leaching from natural deposits
<b>Zinc</b> (ppm)	2013	5.0	NS	12.75	0–51	No	Runoff/leaching from natural deposits; industrial wastes

## UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
<b>Boron</b> (ppb)	2013	120	110–150
<b>Sodium</b> (ppm)	2013	64	57–72
<b>Vanadium</b> (ppb)	2013	18	14–21

<sup>1</sup> While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

## Definitions

**AL (Regulatory Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**µS/cm (microsiemens per centimeter):** A unit expressing the amount of electrical conductivity of a solution.

**MCL (Maximum Contaminant Level):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste and appearance of drinking water.

**MCLG (Maximum Contaminant Level Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

**MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG (Maximum Residual Disinfectant Level Goal):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**NA:** Not applicable

**NS:** No standard

**pCi/L (picocuries per liter):** A measure of radioactivity.

**PDWS (Primary Drinking Water Standard):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**PHG (Public Health Goal):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).